

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

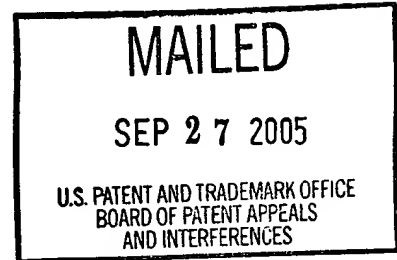
**UNITED STATES PATENT AND TRADEMARK OFFICE**

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Ex parte TAIZO AKIMOTO

Appeal No. 2005-1234  
Application No. 09/749,752

HEARD: August 11, 2005



Before SCHEINER, ADAMS, and GREEN, Administrative Patent Judges.

GREEN, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 7, 8, 10, 11 and 18-21, all of the claims in appeal.

Claims 8, 11, 20 and 21 are representative of the subject matter on appeal, and read as follows:

8. An analysis system for analyzing a target substance by causing the target substance marked with a marker to bind selectively to some of plural types of probes arranged and fixed on a test piece and detecting positions of the probes to which the target substance has bound comprising:

means for attaching management information peculiar to the test piece to a predetermined location on the test piece using a marker the same as or similar to the marker used for marking the target substance,

means for obtaining information concerning the positions of the probes to which the target substance has bound and simultaneously detecting the management information attached to the test piece, and

means for storing the management information in association with the information concerning the positions of the probes to which the target substance has bound.

11. An analysis system for analyzing a target substance by causing the target substance marked with a marker to bind selectively to some of plural types of probes arranged and fixed on a test piece and detecting positions of the probes to which the target substance has bound comprising:

means for attaching encoded management information to a predetermined location on the test piece as ID information peculiar to the test piece using a marker the same as or similar to the marker used for marking the target substance,

means for obtaining information concerning the positions of the probes to which the target substance has bound and simultaneously detecting the ID information attached to the test piece,

first storing means for storing the management information in association with the ID information,

means for decoding the detected ID information by searching through the first storing means referring to the detected ID information to find the management information associated with the detected ID information, and

second storing means for storing the management information in association with the information concerning the positions of the probes to which the target substance has bound.

20. An analysis system for analyzing a target substance by causing the target substance marked with a marker to bind selectively to some of plural types of probes arranged and fixed on a test piece and detecting positions of the probes to which the target substance has bound comprising:

means for attaching management information peculiar to the test piece to a predetermined location on the test piece,

means for obtaining information concerning the positions of the probes to which the target substance has bound,

means for detecting the management information attached to the test piece, and

means for storing the management information in association with the information concerning the positions of the probes to which the target substance has bound,

wherein obtaining the information concerning the positions of the probes to which the target substance has bound occurs simultaneously with detecting the management information attached to the test piece.

21. An analysis system for analyzing a target substance by causing the target substance marked with a marker to bind selectively to some of plural types of probes arranged and fixed on a test piece and detecting positions of the probes to which the target substance has bound comprising:

means for attaching encoded management information to a predetermined location on the test piece as ID information peculiar to the test piece,

means for obtaining information concerning the positions of the probes to which the target substance has bound,

means for detecting the ID information attached to the test piece,

first storing means for storing the management information in association with the ID information,

means for decoding the detected ID information by searching through the first storing means referring to the detected ID information to find the management information associated with the detected ID information, and

second storing means for storing the management information in association with the information concerning the positions of the probes to which the target substance has bound,

wherein obtaining information concerning the positions of the probes to which the target substance has bound occurs simultaneously with detecting the ID information attached to the test piece.

The examiner relies upon the following references:

Perttunen et al. (Perttunen)	5,968,728	Oct. 19, 1999
Zeleny et al. (Zeleny)	6,215,894	Apr. 10, 2001
Noblett	6,362,004	Mar. 26, 2002

Claims 7, 8, 10, 11 and 18-21 stand rejected under 35 U.S.C. § 102 as being anticipated by either Zeleny, Noblett or Perttunen. After careful review of the record and consideration of the issues before us, we reverse all of the rejections of record.

### DISCUSSION

The issue before us turns on the construction of the claims on appeal. Both the examiner and appellants agree, and we do not disagree, that the claims are written as “means-plus-function.” The construction of the claims is thus governed by 35 U.S.C. § 112, sixth paragraph; therefore, in construing the claim, we must “look to the specification and interpret that language in light of the corresponding structure, material, or acts described therein, and equivalents thereof, to the extent that the specification provides such disclosure.” In re Donaldson, 16 F.3d 1189, 1193, 29 USPQ2d 1845, 1848 (Fed. Cir. 1994) (en banc).

Focusing first on independent claims 8 and 11, the portion of the claims that we find to be dispositive of the issues on appeal is the construction of the phrase “means for obtaining information concerning the positions of the probes to which the target substance has bound and simultaneously detecting the management information attached to the test piece.”

maintain its plain meaning, since the meaning of the term ‘simultaneously’ is known to one of ordinary skill in the art.” Id.

Following the mandate of Donaldson, we look to the specification and interpret the phrase “means for obtaining information concerning the positions of the probes to which the target substance has bound and simultaneously detecting the management information attached to the test piece” in light of the corresponding structure, material, or acts described by the specification, as well as equivalents thereof. Moreover, as the determination of function, as well as the determination of the corresponding structure disclosed in the specification are issues of claim construction and thus questions of law, see Chiuminatta Concrete Concepts Inc. v. Cardinal Industries Inc., 145 F.3d 1303, 1307, 46 USPQ2d 1752, 1755-56 (Fed. Cir. 1998), we are not bound by the claim construction of the examiner.

The claim limitation at issue therefore requires the structure to perform two functions, the first being obtaining information concerning the positions of the probes to which the target substance has bound, and the second being simultaneously detecting the management information attached to the test piece. Looking to the specification, we find that the structure required by the specification is a “stimulable phosphor sheet.”<sup>1</sup> See, e.g., Specification, page

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20. Thus, the specification teaches at page 23, “[a]ccordingly, the ID information stored on the stimuable phosphor sheet 30 may be detected concurrently with the information concerning the positions of the hybridized probes stored on the same stimuable phosphor sheet,” and also teaches that “[m]oreover, in the above embodiment, the ID information and the information concerning the positions of the hybridized probes can be detected simultaneously requiring no additional step, as the radioactive isotope the same as or similar to the radioactive isotope used as the marker is used for printing the ID information to the test piece 1.” See also id. at 31-32 (“the stimuable phosphor sheet 30 is capable of storing the ID information peculiar to the test piece 1, i.e., the encoded form of the management information of the test piece 1 . . . as the ID information has been printed on the test piece 1 by the printing device 53 using the radioactive isotope the same as the one used as the marker. Accordingly, the ID information stored on the stimuable phosphor sheet 30 may be detected concurrently with the information concerning the positions of the hybridized probes stored on the same stimuable phosphor sheet 30.”).

We have considered the portions of the specification that describe the use of a photomultiplier tube without the use of a stimuable phosphor sheet. Page 24 of the specification teaches “[i]n addition, fluorescent dye . . . may be used in place of the radioactive isotope . . . as the marker to mark the target substance. In that case, the PMT can detect the direct information from the test piece without the use of the stimuable phosphor sheet by projecting stimulating

light capable of stimulating the fluorescent dye directly onto the test piece 1.”

See also, id. at 33.

The above passage, however, only makes reference to the marker to mark the target substance. As opposed to the passages that refer to the use of a stimuable phosphor sheet, it makes no reference to the management information. Thus, we do not find that a photomultiplier serves the two functions required by the claim limitation “means for obtaining information concerning the positions of the probes to which the target substance has bound and simultaneously detecting the management information attached to the test piece,” which requires the structure to perform the two functions of obtaining information concerning the positions of the probes to which the target substance has bound, and simultaneously detecting the management information attached to the test piece.

With respect to independent claims 20 and 21, those claims require “means for obtaining information concerning the positions of the probes to which the target substance has bound,” “wherein obtaining the information concerning the positions of the probes to which the target substance has bound occurs simultaneously with detecting the management information attached to the test piece.” We read those two limitations together to again require that the structure perform two functions, that is obtaining information concerning the positions of the probes to which the target substance has bound and simultaneously detecting the management information attached to the test piece. Thus, using



the analysis set forth above, we construe the structure for the recited means as being a stimuable phosphor sheet.

Turning to the anticipation rejections of record, the examiner has rejected all of the claims on appeal as being anticipated by either Zeleny, Noblett or Perttunen. Under 35 U.S.C. § 112, sixth paragraph, the claim is “construed to cover corresponding structure, material, or acts described in the specification and equivalents thereof.” Thus, a reference may still be anticipatory even if the structure disclosed by that reference is not identical to that claimed, if the reference describes an equivalent structure. See In re Bond, 910 F.2d 831, 833, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990). “If the examiner finds that a prior art element (1) performs the function specified in the claim, (2) is not excluded by any explicit definition provided in the specification for an equivalent, and (3) is an equivalent of the means- . . . plus-function limitation, the examiner should provide an explanation and rationale in the Office action as to why the prior art element is an equivalent.” Supplemental Examination Guidelines for Determining the Applicability of 35 U.S.C. 112, para. 6, 65 Fed. Reg. 38,510, 38,514 (June 21, 2000).

In the anticipation rejections over Zeleny, Noblett or Perttunen, the examiner has construed the structure corresponding to the “means for obtaining information concerning the positions of the probes to which the target substance has bound and simultaneously detecting the management information attached to the test piece” as a photomultiplier (PMT). See Examiner’s Answer pages 6-

7<sup>2</sup>, 16<sup>3</sup> and 23.<sup>4</sup> ("a means for obtaining information concerning the positions of the probes to which the target substance has bound and simultaneously detecting the management information attached to the test piece, i.e. a photomultiplier (PMT)).

As we have discussed above with respect to the construction of the limitation at issue, the specification specifically excludes a photomultiplier tube as performing both functions required by the means, that is, obtaining information concerning the positions of the probes to which the target substance has bound and simultaneously detecting the management information attached to the test piece. Moreover, even if the specification did not exclude a photomultiplier tube as an equivalent to the stimuable phosphor sheet, the examiner has not provided an explanation and rationale as to why the photomultiplier is an equivalent, and we would also be compelled to reverse the rejection on that basis as well.

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<sup>2</sup> Setting forth the anticipation rejection over Zeleny.

<sup>3</sup> Setting forth the anticipation rejection over Noblett.

<sup>4</sup> Setting forth the anticipation rejection over Perttunen.

CONCLUSION

Based on our construction of the claims, we find that Zeleny, Noblett and Perttunen do not anticipate the claimed subject matter, and we thus reverse all of the rejections of record.

REVERSED



Toni R. Scheiner  
Administrative Patent Judge



Donald E. Adams  
Administrative Patent Judge



Lora M. Green  
Administrative Patent Judge

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